

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

ON SOME NORTH AMERICAN SPECIES OF MICRODON.
[DIPTERA : SYRPHIDAE.]

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The genus *Microdon* is full of difficulties for the systematist. There has been considerable uncertainty as to the identity and specific limits of some of our forms, particularly in the group comprising *tristis* Loew and *bombiformis* Townsend. The rarity of the flies and their consequent scanty representation in most collections have added to the generally admitted difficulties of the group. Prof. Chas. W. Johnson has recently made the first important step in clarifying the subject by establishing the identity of Loew's *Microdon tristis*, which has been long misunderstood.*

Some time ago the writer worked over the material in the national collection with results that seem worth publishing. He is greatly indebted to Mr. V. A. E. Daecke of Harrisburg, Pa., who has kindly loaned him his entire *Microdon* material in the *tristis* group. This additional material has proved most useful in working out the results here presented. The following table should be helpful in separating the forms grouping around *tristis*; it is based on material before the writer and species not represented by specimens are excluded. Some additional species of *Microdon* not especially related are discussed or described at the end of this paper.

Table of species related to *Microdon tristis*.

1. Scutellum convex, its hind margin rounded, unarmed	2
Scutellum with distinct, although often small, spines	5
2. Face clothed with coarse, black and pale hairs intermixed; abdomen wholly black	<i>senilis</i> n. sp.
Not with this combination of characters	3

* Psyche, vol. 23, no. 3 (June, 1916), p. 75.

3. Face clothed with light colored pile 4
 Face clothed with black pile **modestus** n. sp.
4. Abdomen wholly black beyond the second segment; antennæ slender *bombiformis* Tnsd.
 Abdomen with patches or bands of light colored pile beyond second segment; antennæ much shorter, the third joint much thickened and tapered to a blunt point *coloradensis* Ckll. & Andr.
5. Second abdominal segment dorsally with broad impressions at sides on anterior half, the lateral margin convex *ruficrus* Will.
 Second abdominal segment simple 6
6. Antennæ unusually long and slender, the third joint as long as the first, subcylindrical, nearly uniform throughout, the tip bluntly rounded *tristis* Loew
 Antennæ normal, the third joint more or less thickened toward the middle 7
7. Pile on frons mostly black; body deep blue **piperi** n. sp.
 Pile on frons wholly pale 8
8. Body color blackish *cothurnatus* Big., eastern form.
 Body with cupreous or bluish reflections . *cothurnatus*, western form.

Microdon cothurnatus Bigot.

This is the species that has been treated by Williston and subsequent authors as *tristis*. In eastern specimens the general body color is black and without metallic coloration. The pile on the head is pale throughout. The antennæ are rather stout, the third joint subequal with the first or a trifle shorter. The third joint is thickened and compressed, thickest a short distance beyond base; when viewed in its broader aspect, it is broadly rounded at the tip. The scutellum is convex and shows hardly any trace of emargination, while the teeth are minute. In darkly colored specimens the legs are piceous, with but slightly lighter brownish shades at the bases of the femora and narrowly on the knees; the whitish pile is densest on the tibiæ and the hind tarsals have a cushion of dense short yellow hair ventrally. In poorly or incompletely pigmented specimens the legs are more or less ferruginous or yellowish brown, the tibiæ often lighter colored than the femora. In the male the hypopygium is more or less fully tinged with ferruginous. In the less deeply pigmented specimens of both sexes the same shade extends along the sides of the abdomen, as well as along the apical margins of the segments. The specimens before me that answer to the above description are from east of the Rockies. The localities represented are as follows:

New York, Connecticut (Williston collection); Springfield, Massachusetts (G. Dimmock); Mount Tom, Mass. (Knab); West Point, Nebraska (U. S. Bur. Ent. no. 1145½, reared from larvæ collected by L. Bruner); Eagle Harbor, Michigan (H. G. Hubbard).

Specimens from the Rocky Mountain region differ from the eastern ones in the dark coppery or metallic greenish blue color of the mesonotum and the bluish tinge of the abdomen, but agree in all other respects.

Bigot's description is from a specimen of the form with copper-tinted mesonotum which apparently had lost its abdomen. The specimens described by Cockerell and Andrews as a subspecies of *Microdon tristis* (Proc. U. S. Nat. Mus., vol. 51, 1916, p. 55) are of this form. The thoracic pile of all these western specimens is more yellow than in the eastern ones.

Originally described from Washington Territory. In addition to the two specimens from Boulder, Colorado, above mentioned, there are before me specimens from Kaslo and Ainsworth, British Columbia (R. P. Currie); Hoquiam, Washington (H. E. Burke); Lake Tahoe, California (Hubbard and Schwarz); North Cheyenne Canyon, El Paso County, Colorado (A. B. Champlain); Douglas County, Colo., reared by C. T. Greene from larvæ found with *Formica truncicola integroides* variety *haemorrhoidalis* Emery.* In these specimens the thoracic integument ranges in coloration from dull coppery to metallic blue. A nearly black specimen from Clyde, Colorado, 10,000 feet (Daecke collection), approaches the eastern form in coloration.†

There is a considerable number of puparia before me, in most cases associated with imago. These puparia show characteristic reticulations, with rows of heavier ridges dorsally and at the sides. The puparia of the eastern and of the western forms of *cothurnatus* are indistinguishable, as is evident from the material before me.

***Microdon tristis* Loew.**

This species resembles *cothurnatus* in general appearance, but differs markedly in the broader frons, the longer and more slender antennæ, the shape of the more prominent and strongly dentate scutellum, the elongate, narrower abdomen and the different arrangement of the white pile on the latter.

There are before me six specimens from Inglenook, Pennsylvania, collected by V. A. E. Daecke and W. S. Fisher; also a female from Lotell, Pa. (Daecke). The species has never been found in the vicinity of Washington and the type undoubtedly came from the mountainous portion of Virginia, probably Berkeley Springs (now in West Virginia), where Osten Sacken spent vacations. According to Johnson it ranges as far northward as Massachusetts.

***Microdon ruficrus* (Williston).**

Microdon tristis var. *ruficrus* Williston, 1886, Synopsis No. Amer. Syrphidæ, p. 7.

This species, which was described as a varietal form of *cothurnatus* ("tristis" Williston), appears to have remained unrecognized by subsequent workers. Aside from its superficial resemblance, it is one of the most distinct species. This is not apparent from the original description,

* Determination S. A. Rohwer.

† Charles R. Jones describes a *Microdon similis*, from Colorado, in Annals Ent. Soc. Amer., vol. 10, No. 2, p. 219 (June, 1917). The description is wholly inadequate, but as far as it goes answers very well for one of the darker forms of *cothurnatus*. The length indicated, 11 mm., exceeds the largest specimen now before me by only one millimeter.

which dwells principally on unessential color differences. Characteristic for this species is a pair of rather large depressions on the dorsum of the second abdominal segment, laterally close to the margin; these leave the lateral margins raised and convex. In *tristis* and the other species of the group the dorsum of the second abdominal segment is simple, without depressions or raised lateral margins. The abdomen is distinctly narrower and more elongate than in *cothurnatus*. In addition, the scutellum of *ruficrus* is more elongate, less convex, distinctly emarginate apically and with a pair of large teeth. The body coloration is dark bluish, like some of the western specimens of *cothurnatus*, and the pile is pale throughout as in that species. However, the pile appears to be more sparse and shorter; on the abdominal segments it forms narrow apical bands, narrowly interrupted in the middle, rather than large patches. The coloration of the legs, as given by Williston, is not diagnostic and varies in the same manner as in *cothurnatus*.

The type, a male from Connecticut, and eight other specimens are before me. These latter are: a male taken in the vicinity of Chain Bridge near Washington, June 9, 1905 (D. H. Clemons); a male, Great Falls, Virginia, June 25, 1915 (C. T. Greene); a male, Bladensburg, Maryland, June 13, 1916 (F. R. Cole); a male and female, Hancock, Maryland, September 1, 1916 (Cole); a male and female collected by Mr. Daecke at Browns Mills Junction, New Jersey, June 22 and July 5, 1907; a male collected at Franconia, New Hampshire, July 18, 1915, by C. H. T. Townsend. The last mentioned specimen has the pile brassy yellow, but in all other respects agrees with the typical form. The specimens average appreciably smaller than *cothurnatus*.

This species, in the modification of the second abdominal segment, shows a distinct approach toward *coarctatus* Loew and *balliopterus* Loew, where this segment shows two deep depressions and strong lateral swellings. The genus *Omegasyrphus* Giglio-Tos, based upon this modification, like other genera segregated from *Microdon*, appears untenable in the light of more complete knowledge. In addition to the intergradient character of *M. ruficrus*, *M. laetus* Loew and *M. craigheadii* Walton show a swollen second abdominal segment, however without the depressions observed in the already mentioned forms.

***Microdon piperi*, new species.**

Male.—Dark metallic blue, moderately shining, the mesonotum with slight greenish luster. Frons strongly convex on posterior two-thirds, roughened, posteriorly less than one-third the width of head, strongly narrowed to transverse impression, beyond which point the ocular margins again strongly diverge. Occiput and frons clothed wholly with dense short black pile, this reaching forward to insertion of antennæ. Face clothed wholly with dense recumbent creamy white pile. Antennæ black, long and slender, the first joint about as long as the second and third together, the third moderately thickened and broadly rounded at tip; arista a very stout bristle, shorter than third joint. Mesonotum with a

pair of indistinct narrow blackish longitudinal stripes; pile dirty yellowish gray, short and dense, longer and paler at lateral margins. Scutellum deep blue, broad and short, strongly convex, the hind margin rounded and with only a slight trace of median emargination, the spines rather small and remote from each other; pile yellow-gray, long and dense. Abdomen large, elongate-ovate, much broader than the thorax, broadest at hind angles of second segment and beyond this rounded off to the blunt apex; dorsum flattened anteriorly, convex on distal half; vestiture on second and third segments of creamy white pile, dense and longer at the sides, on the second covering the entire dorsum, on the third the sides and forming a broadly interrupted apical band; distal portion of abdomen with sparse and inconspicuous dark hairs. Legs black, the tibiae basally tinged with dull ferruginous; vestiture short and inconspicuous, that on the femora black, that on the tibiae with creamy yellow luster; tarsi ventrally with ferruginous yellow cushions; pulvilli ferruginous, with a fine white fringe. Wings moderately broad, tinged with gray, without distinct cloudings at the cross-veins; posterior angles of first posterior and discal cells roundedly produced, not appendiculate, a large spur projecting into middle of first posterior cell from third vein. Halteres yellowish. Length: Body about 12 mm., wing 9 mm.

Female.—Frons at posterior angles of eyes about one-third the width of head, the eye-margins straight and diverging very gradually to lower part of face; transverse furrow indistinct. Vestiture of mesonotum and scutellum much more dense than in the male. Wings on distal half with brown cloudings along the veins. Abdomen broader than in the male, more strongly tapered toward the tip. Length: Body about 13 mm., wing 10 mm.

Seattle, Washington, one male, issued June 27, 1901 (C. V. Piper); Oregon, one female, without indication of exact locality or collector; Mount Hood, Oregon, one female (Williston collection).

Type: Cat. no. 21,414, U. S. Nat. Mus.

The female from Mount Hood was included by Williston under *cothurnatus* in his "Synopsis of North American Syrphidæ," page 8; it is in a poor state of preservation. The male was reared by Prof. C. V. Piper. The puparium resembles that of *cothurnatus*, showing reticulations of a very similar character; these differ, however, in being more uniform, without the differentiated median and lateral series observable in *cothurnatus*; it is also slightly less convex.

***Microdon bombiformis* Townsend.**

There are seventeen specimens of this very distinct species before me, one from Washington, District of Columbia, without indication of collector, four taken in Rock Creek Park, District of Columbia, by C. H. T. Townsend, the other twelve taken at Inglenook, Pennsylvania, by Mr. Daecke. Johnson has recently recorded the occurrence of this species in Massachusetts and Connecticut (Psyche, vol. 23, 1916, p. 76).

The series of both sexes before me is remarkably uniform in coloration.

All have the mesonotum, scutellum and second abdominal segment metallic green-blue covered with yellowish pile; the abdomen beyond the second segment is wholly deep black and clothed with short, inconspicuous black pile. The scutellum is convex and unarmed. In the male the frons is much narrower than the width of one eye and strongly narrowed toward the antennæ. Apparently this species is confined to the Appalachian region.

Aldrich has placed *Microdon bombiformis* as a synonym of *megalogaster* Snow, a species of uncertain origin;* in this he has been followed by Johnson,† Cockerell and Andrews,‡ and Banks, Greene, McAtee and Shannon.§ I am unable to concur in this synonymy, since Snow's description, although it corresponds as to general coloration, disagrees in important details. Thus, the scutellum is stated to be "gently emarginate, the small obtuse tubercles approximate." All the specimens of *bombiformis* examined by me have the posterior margin of the scutellum evenly rounded and convex, without the slightest trace of tubercles or emargination. I must consider this difference fundamental. Furthermore, Snow states that in *megalogaster* the front tibiæ and metatarsi are clothed on the inner side with short golden pile; in *bombiformis* the front tibiæ have a patch of dense yellow pile, visible only in certain lights and occupying slightly less than the distal half; similar pile occurs ventrally on the front metatarsi.||

***Microdon coloradensis* Cockerell and Andrews.¶**

This species, like the preceding one, resembles a bumble-bee in appearance and is further remarkable for its striking sexual dichroism. Prof. Cockerell informs me that he has procured additional specimens since the description was drawn up and that the sexual color differences prove to be constant. The female from Pecos, New Mexico, in the national collection belongs here, as already indicated by Cockerell and Andrews.

Along with the two following ones, this species is remarkable for the broad short frons, the antennæ being inserted unusually high upon the head. The male *coloradensis* has the frons considerably over one-third the width of the head and broadening regularly and very gradually toward the antennæ. In all three species the third antennal joint is short and very broad near the base, shortly lanceolate in outline.

* Cat. North Amer. Diptera, 1905, pp. 345, 346.

† Psyche, vol. 23, 1916, p. 76.

‡ Proc. U. S. Nat. Mus., vol. 51, 1916, p. 53.

§ Proc. Biol. Soc. Wash., vol. 29, 1916, p. 176.

|| Since going to press I have been able to examine 15 additional specimens *M. bombiformis* taken by Mr. W. S. Fisher at Inglenook, Pa., June, 1917. In two of the males very minute tubercles are perceptible on the scutellum; a few other males show slight apical indentations on the scutellum. None of the five females show any modification of the scutellum. It should be noted that the pile of the scutellum is unusually long and dense in this species, so that very minute tubercles can hardly be detected without its removal. This leaves only the difference in the color of the pile on the front tibiæ to separate the species from *megalogaster*.

¶ Proc. U. S. Nat. Mus., vol. 51, 1916, p. 53.

Microdon modestus, new species.

Male.—Piceous black, without metallic luster. Frons broad, narrowing slightly and regularly to posterior angles of eyes, where it is distinctly more than one-third the width of the head; transverse furrow arcuate, indistinct, an elongate polished bare spot over insertion of antennæ; vestiture of frons of black hairs with dirty yellowish ones intermixed, particularly posteriorly and at the sides. Face clothed with black hairs, some pale ones at lower margin. Antennæ black; first joint long and slender, about equalling longitudinal diameter of head; second joint slightly more than half as long as first, much enlarged distally; third joint hardly as long as first, much thickened on basal third and beyond tapering to a sharp point; arista a coarse piceous bristle, about equal in length to third joint. Mesonotum piceous black, rather shining, clothed with dull yellow hair, rather sparse on the disk and becoming dense toward margins. Scutellum broadly rounded posteriorly, unarmed, concolorous with mesonotum and densely clothed with long dull yellow pile. Abdomen elongate-ovate, flattened, much broader than the thorax, broadest at third segment; color black, clothed dorsally with short but rather dense black pile, the posterior margin of the second segment narrowly yellow-haired and ending in patches of such hairs at posterior angles; third segment with similar patches of yellow hair at posterior angles; fourth segment with a series of coarse pale setæ at posterior margin. Genitalia piceous brown. Venter with scattered long pale hairs. Legs black and clothed mostly with short black pile, the tarsi ventrally with slightly paler hairs, on the hind legs their first two joints ventrally with a dense cushion of dull ferruginous pile; pulvilli dull ferruginous, claws black. Wings short, moderately broad, grayish hyaline, unspotted; posterior angles of first posterior and discal cells roundedly produced, in both with the vein-section closing the cell sinuate and bearing a very short spur projecting inward. Halteres ferruginous yellow. Tegulæ pale yellowish. Length: Body about 13 mm., wing 10 mm.

Female.—Frons similar to the male, still broader, the transverse furrow obsolete; vestiture of frons and face almost wholly black. Mesonotum clothed wholly with black hairs. Scutellum mostly black-haired, a few whitish hairs intermixed. Abdomen wholly black-haired. Legs wholly black, only the cushions of the tarsi indistinctly paler. Length: Body about 11 mm., wing 8.5 mm.

Elko, Nevada, 2 males, 1 female (no collector indicated).

Type: Cat. no. 21,415, U. S. Nat. Mus.

The type male has the hairs of the mesonotum and scutellum deep brownish yellow, while in the paratype male this pubescence is a very pale dirty yellow.

Microdon senilis, new species.

Female.—Black, without metallic luster. Frons at posterior angles of eyes fully one-third the width of head, broadening gradually and evenly to the face; transverse furrow obsolete, a narrow, smooth elevated stripe

medianly. Head-vestiture of black and pale yellowish hairs, the black ones predominating on middle of frons, the pale ones on lower half of face, occiput and orbits. Antennæ black; first joint moderately long and slender; second joint less than half the length of the first, much enlarged distally; third joint stout, distinctly shorter than the first, thickened to basal third and beyond tapered to a sharp point; arista coarse, black, about as long as the third joint. Mesonotum shining black, clothed throughout with short, coarse, black pile, densest towards margins. Scutellum short and broad, the posterior margin irregularly rounded, unarmed; vestiture of dull ochreous yellow pile. Abdomen elongate-ovate, flattened, much broader than the thorax, black, basally shining, beyond base of second segment rugose and clothed with very short black pile; a small patch of pale hairs at posterior angles of second segment. Venter wholly black. Legs black and black-haired, the tibiæ with pale yellowish hairs along the outer side; tarsi of all the legs ventrally with cushions of ferruginous pile. Pulvilli pale ferruginous; claws black. Wings broad, grayish hyaline; posterior angles of first posterior and discal cells roundedly produced, the former with a stump projecting at the location of the angle. Halteres pale yellow. Length: Body about 14 mm., wing 10.5 mm.

Claremont, California, one female (F. R. Cole).

Type: Cat. no. 21,416, U. S. Nat. Mus.

The specimen was generously presented to the national collection by Mr. Cole. The close relationship of this species with *modestus* and *coloradensis* is obvious through both structural and coloration characters; however, differences exist which leave no doubt that these forms are specifically distinct.

***Microdon rufipes* (Macquart).**

Aphritis rufipes Macquart, 1842, Dipt. Exot., vol. 2, pt. 2, p. 11, pl. 2, fig. 3.

Microdon limbus Williston, 1886, Synopsis No. Amer. Syrphidæ, p. 8.

Williston's type, which is before me, agrees in every way with Macquart's description. In addition there are before me, a male from Jacksonville, Florida (W. H. Ashmead), and a female from Newport News, Virginia, taken September 3, 1910, by E. W. Wall. Macquart's specimen is stated to have come from Philadelphia.

***Microdon fulgens* Wiedemann.**

This is a large, robust, brilliantly metallic colored species originally described from Georgia. The species figures in some collections under the name *aurifex*, but it would seem incorrectly. It may be that the Mexican specimens so reported really belong to *aurifex*; at all events, *M. trochilus* Walker, from Mexico, so referred, is stated to have the abdomen clothed with pale yellow hairs, as in a specimen from Pará, Brazil, reported under *aurifex* by Macquart. The original description of *aurifex*, unfortun-

ately, makes no mention of the abdominal vestiture, but states that the last two segments of the abdomen are nearly pure golden, which is hardly in agreement with our specimens.

Microdon fulgens has the hairs of the abdomen, which are very short and do not obscure the body-color, for the most part black; only at the sides slight patches of pale yellow hairs can be detected. The body-color varies considerably in different specimens, on the thorax from brilliant metallic blue and violet to blue-green; on the abdomen from blue-green through golden green to brilliant red and nearly golden.

Eleven specimens are before me: Okefenokee Swamp, Georgia, June, 1912, 2 males, 1 female (Cornell expedition); Enterprise, Florida, May 13, 1 female (H. G. Hubbard); Miami, Florida, October 22, 1 female (C. H. T. Townsend); "Florida," 1 male, 1 female; Dade County, Florida, 1 male, 1 female (E. A. Schwarz); Fort Meyers, Florida, May 7, 1916, 1 female (J. C. Bradley); Springfield, Missouri, July 16, 1912, 1 female (H. H. Knight). The two specimens last mentioned and the three from Georgia belong to the Cornell collection.

One of the males from Georgia has on the abdomen, close to the base of the third segment, a velvet-black fascia; this is slightly arcuate, doubly emarginate in front, and stops considerably short of the lateral margins. Elongate patches of similar character appear on the lateral lobes of the second segment. These velvet-black markings are not due to pubescence, but apparently to a modification of the integument itself. The three other males before me show medianly on the third abdominal segment very faint indications of the beginning of such a fascia, but there is no trace of it in the females.

With some doubt I refer here a male from Tehuantepec, Mexico (Sumichrast), and mention it only on account of the presence of the velvety fascia of the third abdominal segment. This differs from that in the specimen above described in being medianly produced posteriorly as well as anteriorly. Otherwise, the only appreciable differences from typical *fulgens* are the somewhat smaller size and less robust abdomen, as well as paler wings.

***Microdon scutifer*, new species.**

Female.—Moderately stout. Head black. Frons over one-third the width of the head, the eye margins parallel to level of antennæ; surface rather densely covered with setigerous punctures except about ocelli and above antennæ; pile short, black on occiput, white in front of the obsolescent transverse furrow. Face moderately convex, narrowing very slightly toward the mouth; pubescence black in the middle, broadly yellowish white at the sides and beneath. Proboscis bright ferruginous. Antennæ blackish, stout, moderately long, the first and third joints subequal; third joint ochreous at base, moderately stout, nearly uniform throughout, bluntly rounded at apex; arista very stout, much shorter than the third joint. Mesonotum bronzy black on the disk, the humeri, lateral and posterior margins broadly light ocher-yellow, posteriorly

forming two deep wedge-shaped indentations into the dark color and slighter ones at the transverse suture; vestiture very short and blackish on the disk, yellowish white and longer on the yellow portions. Scutellum light ocher-yellow, moderately prominent, inflated, with two rather closely approximated but distinct and stout spines; vestiture rather sparse, inconspicuous, yellowish gray, that on the spines whitish. Pleuræ ocher-yellow spotted with brown, the sternopleuræ dark brown and with a patch of pale golden hair. Abdomen elongate, broader than the thorax, broadest at the apex of second segment, tapered very gradually to apex of fourth, the fifth segment tapered to a blunt point and having the form of a nearly equilateral triangle; color dorsally ocher-yellow and blackish brown, the dark color broad on the middle of the first segment and base of second, continued over the third segment in a narrow median stripe, on the fourth and fifth segments spreading out over most of the surface, leaving only the angles broadly ochreous; vestiture of short yellowish white hairs, anteriorly confined to the margins, on third and fourth segments tending to form interrupted posterior bands, on the fifth covering nearly the entire segment; venter ocher-yellow spotted with piceous. Legs stout, piceous black including the coxæ, the knees narrowly ferruginous; tibiæ densely clothed with appressed pile with yellowish white silky luster; tarsi ventrally with bright ferruginous cushions; pulvilli dull ferruginous; claws large and black. Wings broad, tinted with smoky gray, the veins brown; posterior angles of first posterior and discal cells roundedly produced, the former with distinct appendices, the latter with mere trace of stump; middle of first posterior cell with the usual spur from third vein. Halteres pale yellow. Length: Body about 9 mm., wings 7 mm.

Willis, Texas, one female (J. C. Bridwell).

Type: Cat. no. 21,417, U. S. Nat. Mus.

This species is closely related to *Microdon falcatus* Will. from the Isthmus of Tehuantepec. It differs in the much larger size, wholly black head, very different proportion of the antennal joints, as well as in many minor details. In *falcatus* the third antennal joint is nearly twice as long as the first, the scutellar spines are obsolete and the body vestiture is black.

***Microdon remotus*, new species.**

Male.—Head short, broader than the thorax, piceous black, stained with dull yellow-brown about the mouth, along the sides of the face and upward to transverse suture, also on occiput; frons short, slightly over one-third the width of the head, with distinct transverse suture; ocelli on a distinct callosity; vestiture dirty gray on the occiput, before transverse suture yellowish white. Face moderately prominent, parallel-sided, clothed with dense pile with yellow-white silky luster. Eyes bare. Antennæ with the first and second joints ferruginous yellow, the third greatly elongated, dull black, its base and the arista ferruginous yellow; first and second joints of normal structure, the first about as long as

longitudinal diameter of head; third joint over one-and-a-half times the length of the first, nearly parallel-sided, slightly compressed, the end bluntly rounded off, the surface clothed with very fine and dense pubescence; arista consisting of a ferruginous yellow thickened portion which is stoutest at its middle and about half the length of the third joint, and a fine white bristle about two-thirds the length of proximal portion. Mesonotum piceous, shading to dark reddish brown at the sides; vestiture rather long, moderately dense, of pale yellow hairs. Scutellum concolorous with mesonotum, rather prominent, depressed distally, at tip truncate and with thickened margin, unarmed; vestiture of rather dense and long yellow-brown hairs. Postnotum black, shining. Pleuræ piceous, shining, brownish yellow at the sutures, with a few patches of yellow hair. Abdomen elongate-ovate, broadest at apex of second segment, then tapering gently to the broadly rounded tip; integument dull brownish black stained with brown, an ill-defined median stripe visible on third and fourth segments; vestiture of rather dense, long fine hairs with pale yellow silky luster, nearly evenly distributed but visible only in some lights and therefore giving the appearance of large bare areas. Legs rather stout, the coxæ and femora yellowish brown, the latter broadly yellow at the apices; tibiæ deep ocher-yellow, with a narrow brown ring at middle; tarsi ferruginous yellow; vestiture of rather dense yellow shining hairs, the tarsi ventrally with cushions of golden pile. Pulvilli ocher-yellow. Claws black on distal half. Wings broad, the integument smoky and distinctly hairy, extreme base brown, some brown cloudings in the costal region and on the cross-veins; first posterior and discal cells with the posterior angles blunt and somewhat produced, each with a distinct spur, the usual spur projecting from third vein into middle of first posterior cell. Tegulæ and halteres ocher-yellow. Length: Body about 8 mm., wing 6 mm.

Baracoa, Cuba, September, 1901, one male (A. Busck).

Type: Cat. no. 21,418, U. S. Nat. Mus.

The specimen just described appears to enter very well into the genus *Ceratophya* as originally defined by Wiedemann. In the light of our present knowledge the genus seems hardly tenable; it connects with typical *Microdon* through species having the different characters variously developed and modified, so that no line can be drawn between them.